UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 5 APR 1982

SUBJECT: Reilly Tar Case Plan Supplement

FROM: Robert Leininger

TO: Roger M. Grimes, Chief

The elements of proof for this case can be grouped in three categories:

1. Causation
   - Reilly Tar operated a facility at the site which caused contaminants to enter the environment.

2. Nature and extent of contamination
   - The contaminants from Reilly's operations are carcinogenic
   - Identify the compounds which are caused by Reilly's operations, set forth their toxic properties and show the extent and consequence of the contamination.

3. Remedies
   - Set forth and justify the remedial efforts that have been done and which are needed to contain the environmental problems.

The strategy for developing the elements of proof for these three categories is set forth below:

I. Causation

In order to detail Reilly's operations to the court, it will be necessary to put on certain Reilly people who are conversant with the subject. They will be witnesses "identified with an adverse party" and, therefore, interrogation can be by leading questions pursuant to Rule 611(c) of the Federal Rules of Evidence.

It will, of course, first be necessary to depose these people. The deposition of H.L. Finch, General Manager of the Reilly Tar site from 1960 until the site closing, will take place in Minneapolis during the first week in May. He no longer works for the company. In June, we will probably spend a full week in Indianapolis taking depositions of Carl Lescher, William Justin and T.E. Reilly as discussed on Page 12 of my March 1 Case Plan.

As I have mentioned previously the myriad documents which Reilly has produced have been entered into a computer program by the State. We will need to review these documents in order to prepare for the various depositions. The State will run the program for all documents relating to H.L. Finch next week and give me a copy of the print out. Steve Shakman and Dennis Coyne (of the State) and I will then review the documents and prepare a notebook for the Finch deposition.

There are about 300 documents which relate to Finch. Consequently, Steve, Dennis and I will split them up for the initial "read through". I have all the documents here on microfilm so trips to Minneapolis/St. Paul can be minimized.

Frank Herman, the U.S. Attorney, and Erica Dolgin have indicated that they would prefer to let the State take the lead on the depositions of Reilly's people. I will attend all of the depositions and expect to contribute to the preparation for all of them and to share the conduction of them with the other attorneys, which I expect will include my taking the lead on one of more depositions.

After we have conducted the above-mentioned depositions and read through the documents in preparation for them, I expect that we will want to depose other employees whose names appear frequently in relation to Reilly's operations.

In order to put the information we obtain into perspective, we will be using Dr. Warren S. Thompson as a consultant. He obtained his bachelors, masters and doctorate from Mississippi State University in the field of wood science and is an expert on the types of processes and wastes such as those that took place at the Reilly Tar site. If needed, we can use him to testify as an expert at trial.

Mile Kosakowski said he's already under EPA contract. I've asked Mike to get me a copy of Dr. Thompson's resume.

II. Nature and Extent of Contamination

A. Fact Witnesses

As stated in the Case Plan, Mark Hult of the USGS is the person who is the most knowledgeable about the extent of contamination, the mechanisms for migration of contamination, and the overall hydrogeology of the site. Our Superfund Office is currently working on getting funding for Mark's working at the site for the next year. He is an essential fact witness who will be used to describe how the coal tar, creosote oil and related chemicals have migrated from the site and into the soil and aquifers in the area. He will be used to detail the extent and dynamics of contamination and also to help lay the foundation for the introduction of some of the scientific evidence. I have seen him give two presentations so far and I think that he will be an effective witness. Some state employees (MDH & MPCA) will be needed to lay the foundation for the introduction of other technical evidence.

B. Experts

Besides Dr. Thompson who was mentioned above, we need to come up with experts who will give their opinion on:

1. the toxicological effects of PAH and other coal tar or creosote constituents,
2. the chemistry of coal tar constituents and the process of distilling coal tar into creosote oil, and
3. the hydrogeological aspects of the case (to buttress Mark Hult's testimony)

Mike Kosakowski has put together a technical directive (attachment A) to have Engineering Science Company obtain three expert witnesses for category one and for category two, above (toxicologist and coal tar expert). We should have their names, resumes, journal articles and other scientific publications by this May. In addition, we already have three toxicologists lined up who are willing to serve as expert witnesses. (Attachment B)

While Mark Hult will be a good fact witness, it is necessary to have an expert witness with better credentials in the hydrogeology field who can give his opinion as to the flow of contaminants from the Reilly Tar site to the various aquifers. Jim Geraghty of Geraghty and Miller would be a good choice for the job (as would his partner, Miller) since both are recognized as experts in their field. I have met Geraghty in Minneapolis and he seems very smooth. Greg Halbert, who worked on the Price case told me that he used a professor from Princeton who was an excellent hydrogeological expert. I've asked Greg to send me the professor's resume.

The admissability and relevance of the technical data is a crucial element in this case. We need to ensure the validity of the methodology and the quality control of the procedures in obtaining the data which will be used. Mike Kosakowski has set this in motion by requesting the assistance of EMSL/Las Vegas to check the labs which have analyzed the samples. The request also asks for them to come up with an expert who can testify as to the validity of the data. (See Attachment C).

III. Remedies

The various proposals for remedial action and the time table for further developing them are set forth in the Case Plan. The evidence to support this aspect of the case has yet to be developed since we are still far from deciding what will need to be done. The testimony of our expert toxicologist and hydrogeologist will give the justification for the need for remedial work. A hydrogeologist and soils chemist (such as Dr. Kirk Brown) will be needed to support whatever remedial plan is determined to be the best one.

Corrections to March 1, 1982 Case Plan:

- On the second line of the Summary, St. Louis Park is erroneously referred to as being an eastern suburb of Minneapolis. It is, in fact, a western suburb of Minneapolis.

- On page twelve, among the projected actions from 6/82 to 12/82, it states depositions of Reilly's experts, when named. We do not intend to depose these people but we will obtain the names of experts Reilly intends to call, their area of expertise, the substance of what they are expected to say and basis for their opinions pursuant to Rule 26(b)(4)(A)(i) of the F R.C P.

cc: Bardebring, Ulrich, Schalteis, Walker, Bitter/Ankenin, Takaterra

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Leininger

Attachment A

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

25 Feb. 82

Dr. Timothy G. Shea
Director of Environmental Engineering
Engineering Science Company
7903 Westpark Dr.
McLean, VA 22102

Dear Dr. Shea:

Enclosed is the statement of work for the first Technical Directive under the second subcontract agreement you have with Life Systems, Inc. For simplicity I will refer to it as TD #5, Reilly Tar Technical Support.

Please forward a copy to Dr. Reuter as soon as the subcontract has been approved.

Sincerely,

J.A. Klaas

Enclosure

REILLY TAR

TECHNICAL DIRECTIVE (WORK ASSIGNMENT)

1.0 IDENTIFICATION

Contacts :

Primary EPA Technical Contact:	Name: Michael Kosakowski Title: Environmental Engineer Mail Code:, OWPE 527-M Telephone No. (202) 382-3118
Additional EPA Technical Contact:	Name: Jim Pankanin Tile: Environmental Engineer Mail Code: EPA Region V Telephone No. (312) 886-3009
Primary Justice Department Attorney:	Name: Erica Dolgin Title: Attorney Mail Code: DOJ, Environmental Enforcement Division Telephone No. (202) 633-5258
Additional Attorneys:	Name: Richard Emory Title: Attorney Mail Code: OWPE, WH-527-F Telephone No. (202) 382-3100

Work Assignments Title:

Reilly Tar Technical Support

Period of Performance:

Start Date: Upon receipt of work assignments by ICAIR

Estimated Completion Date:

18 months after starting date

Level of Effort

Number of Experts: Six nominations

Total Estimate: 6 experts X 12 days = 72 days total

Travel: one trip each (total of 6) to Minneapolis or Washington D.C. Four trips total to Chicago or Washington D.C.

2.0 Statement of Work

Background

From 1917 to 1970 Reilly-Tar Chemical Company refined coal tar, which they purchased from various sources and primarily from coke plants in recent years, and treated wood with creosote. They occupied an 80-acre site in St. Louis Park, Minnesota. This is a western suburb of Minneapolis. The City purchased the land in 1970, upon the closing and demolition of existing structures. The site is presently vacant land with a condominium constructed at one corner. Over the past several years, many studies have identified the threat to public health, the contamination of groundwater and soil and a list of remedial actions needed to correct this situation. The main contaminant involved at the site are Polynuclear Aromatic Hydrocarbons (PAH). Also included are phenols and creosote. There is a heavily contaminated area of soil on the site itself, extending off-site in the area of surface drainage. During the years of operation, Reilly utilized several storage lagoons. The site of these lagoons is also highly contaminated. The complex groundwater situation has contributed to the contamination of groundwater within a two to three mile radius of the site, including several different aquifers.

Attached are two tables showing the levels of PAH found in some drinking water wells which were taken out of service. The surficial aquifer contains large pockets of immiscible hydrocarbons. In addition, tar-like substances ooze to the site surface on hot days.

OBJECTIVES:

Objectives of this work assignment are:

1. To provide three expert witnesses for EPA review in the area of human toxicological effects of polynuclear aromatic hydrocarbons and other coal tar or creosote constituents. They should not include:

   Dr. Roy Albert, NYU
   Dr. Dietrick Fraunhaufer, American Health Federation
   Each nominee should have a Ph. D. or M.D.

2. To provide three expert witnesses for EPA review in the area of coal tar constituents and the distillation of coal tar to make creosote, such as for wood preservatives. They should not include:

   James Roche, Pittsburgh
   Warren Thompson, Mississippi State University
   Each nominee should have a Ph.D

3. For each nominee, send by Federal Express a cover sheet and copies of their resume, journal articles or other scientific publications they have authorized to the EPA technical Contact.

4. Conduct conference telephone calls between the Expert Witness Nominees (individually), ICAIR staff and the EPA Technical Contact.

5. Conduct follow-up conference calls between the Expert Witness Nominees (recommended by EPA Technical Contact after first series of conference calls), Justice Department Lawyers, selected EPA Staff from Region 5, OWPE and other individuals who may be included because of their background knowledge, the EPA Technical Contact and ICAIR staff.

6. Have the experts review the background material and be interviewed by phone by the EPA. Each consultant that is judged to be acceptable as an expert witness will receive additional data and subsequently be interviewed in Minneapolis or Washington D.C. At the time of this meeting each consultant will prepare a typed assessment of either the human toxicological aspects of PAH and coal tar/creosote constitutes or coal tar/creosote chemistry, whichever is applicable. Research studies supporting or refuting the health effects should be cited. In progress research should also be identified and its objective and sponsor cited. Hard copies of all references cited in the report will be provided to the EPA.

7. Upon final selection of the expert witnesses, each will prepare a written affidavit in final form on his/her area of expertise (item 1 or 2).

8. Provide by telephone technical advise to assist EPA and the Department of Justice in the preparation of the case. Six telephone calls, each of one hour duration are expected.

9. The two selected experts, one in each area, will attend a pre-trial meeting in Minneapolis the day before giving testimony at trial.

3.0 CONFIDENTIALITY

All analytical data and site descriptions other than the narrative in item 2.0 are to be regarded as confidential information and not to be disclosed until a matter of public.

4.0 Schedule

	ITEM	DUE DATE (a)
1.	Identify expert witness nominees.	+ 21 days
2.	Transmit to EPA data packages on each nominee	+ 25 days
3.	Conference call between EPA Technical Contact and expert (s).	+ 32 days
4.	Conference call between attorneys, EPA staff and experts	+ 35 days
5.	Transmittal of data summary to ICAIR from EPA	+ 37 days
6.	Review of data summary by experts	+ 50 days
7.	Interviews in Minneapolis or Washington D.C. and typed assignments	+ 55 days June 1
8.	Submit affidavit	+ 65 days
9.	Pretrial meeting and court testimony ~~estimated~~	+ 6-18 months

(a) Number of days after approval of Technical Directive Plan.

5.0 DELIVERABLES

The following items will be delivered to the EPA by the subcontractor:

a) Cover sheet, resume and relevant publications by each expert witness

b) Report on the relevant area of expertise to this case.

c) Affidavit

Compound	WELL: #3 343	#4 340	#5 341	#6 342	#7 347	#8 343	#9 344	#11 347	#12 309	#13 345	#14 329	#15 349	#15 31	#1
Naphthalene	99	<10	132	<10	<10	145	<10	<10	182	11	145	1186	19	
Acenaphthylene	<60	<60	2230	<60	<60	<60	<60	<60	<60	<60	<60	1475	60	
Acenaphthene	135	107	6560	<60	<60	<60	<60	<60	<60	91	<60	780	<60	
Fluorene	18	27	2210	<10	<10	<10	<10	<10	<10	<10	<10	249	12	
Phenanthrene	<10	<10	2210	<10	<10	<10	<10	<10	<10	<10	17	113	45	
Anthracene	<31	<31	1300	<31	<31	<31	<31	<31	<31	<31	<31	362	<31	
Fluoranthene	<1	6	716	<1	<1	<1	4	<1	<1	<1	2	532	<1	
Pyrene	2	10	603	<2	<2	<2	<2	<2	<2	<2	6	360	4	
Benzo(a) anthracene	<1	<1	4	<1	<1	<1	<1	<1	1	<1	<1	9	<1	
Chrysene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	5	<2	<2	
Benzo(k) fluoranthene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Benzo(a) pyrene	<1	<1	<2	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1	
Dibenzo(a,h) anthracene	<1	<1	<4	<1	<1	<1	<1	<1	<1	<1	<1	<3	<1	
Benzo(g,h,i)perylene, 7-12-dimethyl benzo(a)anthracene	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	

*All concentrations are expressed in parts per trillion

TABULATION SHEET

TOPIC St. Louis Park Municipal Wells.

	date of sample	lab number	total volume pumped in previous 24 hours	2-methylnaphthalene	acenaphthalene	biphenyl	anthracene	phenanthrene	pyrene	1,2,6,7-tetrahydropyrene	fluorene	fluoranthene	1,2-benzanthracene	chrysene	benzo (a) pyrene	9,10-benzphenanthrene	benzo (e) pyrene	perylene	benzo (g,h,i) perylene	benzo (k) fluoranthene	benzo fluoranthene
			x 1000 gal.	nanograms/liter = parts per trillion																Total PAH	
St. Louis Park #4	10-19-79	6563			230.	47.		66.	87.			5.8	<38	36	<54			<2.2	2437		
St. Louis Park #6	10-19-79	6564			<24.	<5.5		<2.4	<14.			<3.7	<38	<3.6	<5.4			<2.2			
St. Louis Park #8	10-19-79	6565			<24.	<5.5		5.8	<14.			<3.7	<38	<3.6	<5.4			<2.2	5.7		
St. Louis Park #11	10-19-79	6566			<24.	<5.5		<2.4	<14.			<3.7	<38	<3.6	<5.4			<2.2			
St. Louis Park #13	10-19-79	6567			<24.	<5.5		<2.4	<14.			<3.7	<38	<3.6	<5.4			<2.2			
St. Louis Park #18	10-19-79	6568			<24.	<5.5		<2.4	<14.			<3.7	<38	<3.6	<5.4			<2.2			
St. Louis Park #4	11-8-79	7114			<130.	34.		36.	<17.			3.5	<40	<4.0	<6.0			<3.4	7313		
St. Louis Park #15	11-8-79	7115			<600	1300.		1000	<84.			450.	46.	<20.	30.			<17.	2820		
St. Louis Park #4	11-16-79	7386			300.	19.		43.	<14.			1.9	<3.2	<3.8	7.4			<4.2	371.3		
St. Louis Park #4	11-16-79	7387			290.	18.		44.	<14.			2.0	<3.2	<3.8	12.			<4.2	366.4		
St. Louis Park #4	11-16-79	7388			290.	16.		40.	<14.			2.4	<3.2	<3.8	46.4			<4.2	346.4		
St. Louis Park #4	11-16-79	7389			280.	17.		42.	<14.			3.1	<3.2	<3.8	<6.4			<4.2	342.		
St. Louis Park #7	11-5-79	7196			<100.	<24.		<10.	<6			<17.	<24.	<15.	<24.			<16.			
St. Louis Park #9	11-5-79	7197			<100.	<24.		<10.	<6			<17.	<24.	<15.	<24.			<16.			
St. Louis Park #10	11-5-79	7198			<100.	930.		690.	<6			810.	65.	<15.	44.			<16.	2539.0		
St. Louis Park #15	11-5-79	7199			<100.	1140.		1000	<6			550.	33.	<15.	38.			<16.	2761.0		
St. Louis Park #14	10-19-79	6569			39.	11.		12.	<14.			<3.7	<38	<3.6	<5.4			<2.2	162.0		
St. Louis Park #15	10-19-79	6570			<120.	<28.		1300	<70.			830.	59.	<18.	<27.			<11	2169.0		
St. Louis Park #16	10-19-79	6571			<24.	<5.5		6.0	<14.			<3.7	<38	<3.6	<5.4			<2.2	6.0		
St. Louis Park #15	7-16-79	55087		<67.	3200			17000				510.	<52.	<25.	<2.2	<15.		<1.0	5410.0		
St. Louis Park #15	7-18-79	55095		<67.	2400			18000				440.	<52.	<25.	<2.2	<15.		<1.0	4040.0		
St. Louis Park #15	7-19-79	55102		<67.	2800			19000				380.	<52.	<25.	<2.2	<15.		<1.0	4010.0		
St. Louis Park #15	7-20-79	55123			4.3	450.	60.	4000				170.						<1.0	1000.0		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 19, 1982

OFFICE OF RESEARCH AND DEVELOPMENT

SUBJECT: Health Assessment Assistance for Civil Case Aganist Reilly Tar and Chemical Company

FROM: Elizabeth L. Anderson, Director
Office of Health and Environmental Assessment (RD-689)

TO: Lamar Miller, Acting Director
Technical Division
Office of Waste Programs Enforcement

This is in response to your memo requesting the assistance of Mr. Herman Gibb of this office to evaluate past and proposed epidemiological studies of the population of St. Louis Park, Minnesota and the assistance of this office in nominating expert witnesses on the toxicity to humans of polynuclear aromatic hydrocarbons. Accordingly, I have asked that Herman be available to provide epidemiological assistance at your request. Requests for such assistance should be made to Dr. Robert McGaughy, Acting Director of the Carcinogen Assessment Group.

Regarding our recommendation of expert witness on the toxicity of polynuclear aromatic hydrocarbons (PNA's), I would suggest the following:

Roy Albert, M.D.
Professor of Environmental Medicine
Institute of Environmental Medicine
New York University Medical Center
A.J. Lanza Laboratory
Longmeadow Road
Tuxedo, New York 10987
Phone: (914) 351-2396
Expert in chemical carcinogenesis; has testified in several hearings; serves as chairman of the Agency's Carcinogen Assessment Group.

Benjamin Van Duren, Sc.D.
Professor of Environmental Medicine
New York University Medical Center
550 First Avenue
New York, New York 10016
Phone: (212) 340-5626
Expert in chemical carcinogenesis; considerable work in the carcinogenicty of PNA's; organic chemist by training.

LM-022
2/26/82

Dr. Vincent Garry, M.D.
Director of Environmental Pathology Laboratory
Stone Laboratory
4212 29th Ave., SE
Minneapolis, Minnesota 55414
Phone: (612) 376-4856
Environmental pathologist; previously has testified in court proceedings; has done PNA research; has tested the mutagenic activity of the water in St. Louis Park using mammalian cell transformation assays.

We have already contacted the above to determine their willingness to serve as expert witnesses and all have indicated they would be interested. If we can be of further assistance, please do not hesitate to contact me.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

Attachment C

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Request for Assistance - Reilly Tar

FROM: Christopher Capper, Acting Assistant Administrator
Office of Solid Waste and Emergency Response

TO: Courtney Riordan, Acting Assistant Administrator
Office of Research and Development

I am requesting the assistance of EMSL/Las Vegas on our enforcement case against Reilly Tar and Chemical Company for its former operation in St. Louis Park, Minnesota. We will need an expert witness to testify on the validity of the analytical methods and on the quality control procedures used to analyze the samples taken. The Minnesota Department of Health (MDH) modified EPA method number 610 (see attachment) in order to measure polynuclear aromatic hydrocarbons at parts per trillion, and their modifications need to be validated.

In addition to MDH, samples were analyzed at four other labs in the Minneapolis area. We should check quality control procedures at these labs. In discussions with Gene Meier of EMSL, he estimated this work will take from one to two man-months. This work is very important to the case, and even though trial may be several months away, it is necessary to have an independent assessment of our analytical data as soon as possible.

If you have any questions, please contact Mike Kosakowski of my staff at 382-3118.